REMARKS

This amendment is responsive to the Office Action dated May 24, 2010. Claims 1-16 and 18-27 are pending in the present application. Claims 1-26 are rejected. Claims 1, 3-5, 8, 10-12, 15, 18, 19, and 25 have been changed, claim 17 has been cancelled, and claim 27 has been added by this amendment.

Applicant has amended claims 1, 3-5, 8, 10-12, 15, 18, 19, and 25 in this application. Applicant is not conceding in this application that the original or previous claims are not patentable over the art cited by the Examiner, as the present claim amendments are only for facilitating expeditious prosecution of the claimed subject matter. Applicant respectfully reserves the right to pursue the original and other claims in one or more continuations and/or divisional patent applications.

The claim amendments are fully supported by the specification. Amendments to claims 1, 8, 15, and 25 are disclosed at least at page 7 lines 21-23, page 8 lines 1-4 and 10-11; page 4 lines 13-20, and page 1, lines 8-11. Amended claims 3 and 10 are disclosed at least at page 8, lines 2-4 and 15-17, original claims 3 and 10, etc. Claims 4, 5 and 27 are disclosed at least at page 9, line 21 to page 10 line 1; and page 3, lines 8-12. Thus, no new matter has been introduced.

Rejections under 35 U.S.C. 112

The Examiner rejected claims 1-26 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention. The Examiner advised to avoid using the phrase “capable of.” Applicant has amended the phrase to recite “for.” The Examiner also rejected claims 3 and 10, stating that the

claimed "c1" step is incomplete. Applicant has amended claims 3 and 10 to clarify the recited subject matter. Therefore, Applicant respectfully requests that the rejection under 35 U.S.C. 112, second paragraph, be withdrawn.

Rejections under 35 U.S.C. 103

The Examiner rejected claims 1-4, 6-11, 13-18, and 20-26 under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. Patent No. 5,745,739) ("Wang") in view of Agrawal et al. (U.S. Patent No. 6,366,903) ("Agrawal"). Applicant respectfully disagrees, and has amended claims 1, 8, 15, and 25 to clarify the invention.

Wang discloses a system for performing conversion of 2-D virtual coordinates to linear physical memory addresses for rendering objects on a display. Wang uses various techniques such as line drawing, "bitblt" operations, triangle drawings, texture mapping, scaling/shearing, and mirror imaging. Agrawal discloses a system producing a recommendation of indexes and materialized views for a specified workload for a database.

In contrast, the invention of claim 1 recites a computer implemented method for utilizing a column function for a relational database in a structure query language (SQL) environment. The column function is for performing an operation on an indeterminate number of entries, and the relational database utilizing data including a plurality of entries being organized into a table having at least one column and at least one row. The computer performs functions including allowing a user to specify the at least one row as an argument for a generalized scalar function, and simulating a column environment for the at least one row using the generalized scalar function to allow the at

least one row to be provided to the column function as though the at least one row was a column. The column function is performed on the at least one row to provide at least one output.

Wang and Agrawal do not disclose or suggest these features. Neither reference discloses or suggests specifying at least one row of database entries in a table as an argument for a generalized scalar function, simulating a column environment by using the generalized scalar function to allow the at least one row to be provided to the column function as though the at least one row was a column, and performing the column function on the at least one row to provide at least one output.

The Examiner stated that Wang performs the allowing, simulating, and performing of claim 1 using drawing processor 32, texture mapping, and a bitblt operation. It appears that the Examiner is reading Wang's bitblt operation as the claimed "generalized scalar function", and Wang's texture mapping as the "column function."

Wang discloses a bitblt operation as a process of copying a rectangular area of pixels from one memory area to another, which is achieved by moving each row of pixels row by row in X-major order, or each column, column by column (col. 2 line 65 to col. 3 line 9). Texture mapping is disclosed as mapping a surface area of texture data onto a rendered 3-D object surface. To map texture data, one or more maps are selected, and linear addresses of the texture data is read out of a texture map in memory (col. 20, lines 16-51). Texture mapping can be combined with a bitbtl operation for moving a rectangular area of pixels. Each row or column of the source rectangle is read out one at a time, and a corresponding row(s) (or column) of texture data is read

out and combined with the source row (or column); and the combined row (or column) is written to the destination rectangle (col. 21, lines 1-12).

However, Wang does not disclose or suggest using the bitblt operation to allow a row to be provided to the texture mapping operation as though the row was a column. Wang discloses that the bitbtl operation reads a row, row-by-row (or reads a column, column-by-column) to a different memory area (col. 3, lines 2-9), e.g., by transferring blocks of pixels (col. 15 lines 41-44, col. 17 lines 1-4). The rows (or columns) are transferred as rows (or columns, whichever they started as), and so there is no simulation of a column for a row. When a texture mapping is also performed with the bitbtl operation, a row (or column) of texture data corresponding to the source row is read out and combined with the source row (or column). The texture mapping is not a column function receiving a row as though it was a column; the texture mapping simply reads out texture rows that correspond to the bitblt source rows, or reads out texture columns that correspond to source columns. Both operations treat rows as rows, or columns as columns. These operations do not provide rows as though they were columns to a column function, such that a column function can provide an output.

Furthermore, Wang does not disclose such functions performed for SQL database rows and columns in a table, but instead discloses operations for drawing pixels. There is no reason to apply Wang's pixel manipulation for display to an SQL database environment as recited in claim 1. For example, Wang's pixels cannot be queried like entries in rows and columns in a table in an SQL database. Wang's operations for pixel coordinates are not similar to a column function used for columns in a database table. Furthermore, manipulating pixels for display by a graphics controller,

as taught by Wang, is not related at all to the SQL environment of Agrawal, and thus there is no reason or motivation to combine Wang and Agrawal.

Applicant therefore believes that claim 1 is patentable over Wang in view of Agrawal. Claims 2-7 and 22 are dependent on claim 1 and are patentable over Wang and Agrawal for at least the same reasons as claim 1, and for additional reasons. For example, claim 4 recites that the column function provides a maximum value of each of the at least one row. Wang and Agrawal do not disclose or suggest of a column function providing a maximum value of each of the at least one row provided to the column function as though the row was a column. For example, the Examiner cited Agrawal's "MAX-TABLES," but this refers to the maximum number of tables referenced in any query in the workload, and is not a maximum value in at least one row of a table. Claim 6 recites phases that are not disclosed or suggested by Wang and Agrawal; for example, Agrawal's Fig. 3 does not pertain to an initialization phase performed in response to a first entry in each row of a database.

Independent claims 8 and 15 recite similar features to claim 1 and are believed patentable over Wang in view of Agrawal for at least similar reasons as explained above for claim 1. Dependent claims 9-14, 16, and 18-24 are patentable for at least the same reasons as their respective parent claims, and for additional reasons similar to analogous dependent claims 2-7 as explained above.

Independent claim 25 recites a computer implemented method including features similar to claim 1, and is patentable over Wang in view of Agrawal for at least similar reasons as claim 1 explained above. Additionally, claim 25 recites that the generalized scalar function is operable on the at least one row of a table as the argument of the

generalized scalar function. Claim 25 further recites that the column function is operable on the column as an argument of the column function, and is not operable on the at least one row as the argument of the column function. Neither Wang nor Agrawal disclose or suggest a column function having these recited operation characteristics. For example, the bitbtl and texture mapping operations cited by the Examiner Claim 25 is therefore believed patentable over Wang in view of Agrawal. Claim 26 is dependent from claim 25 and is patentable for at least the same reasons as claim 25, and for additional reasons.

In view of the foregoing, Applicant believes that claims 1-4, 6-11, 13-16, 18, and 20-26 are patentable over Wang in view of Agrawal, and respectfully requests that the rejection under 35 U.S.C. 103 be withdrawn.

The Examiner rejected claims 5, 12, and 19 under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Agrawal and further in view of Mackey et al. (U.S. Patent No. 6,691,259) ("Mackey"). Applicant respectfully traverses. Claims 5, 12, and 19 are dependent from claims 1, 8, and 15, which are patentable over Wang and Agrawal as explained above. Mackey does not disclose or suggest the features of claims 1, 8 and 15, such that dependent claims 5, 12, and 19 are patentable over the combination of Wang, Agrawal, and Mackey.

Furthermore, the recitation in amended claims 5, 12, and 19 of providing a minimum value of each of the at least one row is not disclosed by Mackey. Mackey discloses a testing environment of clients and server, where a monitor station captures performance monitor data concerning the server and stores logs. The monitoring is

done remotely to minimize the performance impact on the server under test. This type of minimizing, to reduce an impact of a test station on a performance of a server, does resemble the column function providing a minimum value of each row as recited in claims 5, 12, and 19, and therefore these claims are additionally patentable over Mackey.

In view of the foregoing, Applicant believes that claims 5, 12, and 19 are patentable over Wang in view of Agrawal and Mackey, and respectfully requests that the rejection under 35 U.S.C. 103 be withdrawn.

New claim 27 recites that the column function provides one of the following: a maximum value of each of the at least one row, and a minimum value of each of the at least one row. Claim 27 is therefore similar to claims 4 and 5 and is patentable for at least similar reasons.

Accordingly, Applicants respectfully request reconsideration, allowance and passage to issue of claims 1-16 and 18-27 as now presented.

Applicants' attorney believes this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted,
SAWYER LAW GROUP P.C.

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